

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed February 19, 2008. Upon entry of the amendments in this response, claims 1 and 3 – 39 remain pending. In particular, Applicant amends claims 1, 11, 15, 19, and 23 and cancel claim 2. Applicants cancel claim 2 merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these canceled claims in a continuing application, if Applicants so choose, and do not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. Objections to the Specification

The Office Action objects to the Specification for allegedly failing to provide proper antecedent basis for the claimed subject matter. The Office Action cites MPEP §608.01(o) for support for this objection. Applicant respectfully disagrees with this objection. More specifically, MPEP §608.01(o) states:

[u]sually the terminology of the original claims follows the nomenclature of the specification, but sometimes in amending the claims or in adding new claims, new terms are introduced that do not appear in the specification... While an applicant is not limited to the nomenclature used in the application as filed, he or she should make appropriate amendment of the specification whenever this nomenclature is departed from by amendment of the claims so as to have clear support or antecedent basis in the specification for the new terms appearing in the claims.

(Emphasis added).

Applicant first submits that the term "processor-usable medium" is present in the Specification (see for example, page 15, paragraph [0063]). Applicant further submits that the term "tangible" would be understood by one of ordinary skill in the art for at least the reason that the Office Action uses the term "tangible" on page 4, paragraph 2, when citing the Specification

to argue that the tangible embodiments include “e.g., floppy diskette, memory, etc.” For at least this reason, Applicant respectfully traverses this objection.

II. Rejections Under 35 U.S.C. §112

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §112, second paragraph, as being incomplete for allegedly omitting essential elements. The Office Action cites MPEP §2172.01. However, this section states “[a] claim which fails to interrelate essential elements of the invention as defined by applicant(s) in the specification may be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and distinctly claim the invention.” However, nowhere in the specification or elsewhere has Applicant asserted that any such element is essential. Accordingly, Applicant respectfully traverses this rejection, but amends claim 1, thus rendering this issue moot.

Additionally, the Office Action indicates that claim 2 is indefinite because claim 2 includes elements that are allegedly not disclosed. Applicant respectfully traverses this rejection, but cancels claim 2, thus rendering this issue moot.

Further, the Office Action indicates that claim 19 stands rejected because of alleged lack of antecedent basis for one or more claim elements. Applicant amends claim 19 and submits that claim 19, as amended, meets the requirements of 35 U.S.C. §112.

III. Rejections Under 35 U.S.C. §101

The Office Action indicates that claim 19 stands rejected under 35 U.S.C. §101 as claiming allegedly that the invention is directed to non-statutory subject matter. Applicant respectfully traverses this rejection for at least the reason that the term “processor-usable tangible medium” clearly distinguishes the claim from intangible elements. To further illustrate this point, the Office Action cites the Specification which distinguishes “tangible” embodiments from intangible embodiments (see page 15, paragraph [0063]). For at least the reason that

claim 19 is directed to tangible embodiments, claim 19 meets all the requirements of 35 U.S.C. §101.

IV. Rejections Under 35 U.S.C. §103

A. Claim 1 is Allowable Over Bauer in view of Pearl

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("Bauer") in view of U.S. Patent Number 7,100,005 ("Pearl"). Applicant respectfully traverses this rejection for at least the reason that *Bauer in view of Pearl* fails to disclose, teach, or suggest all of the elements of claim 1. More specifically, claim 1 recites:

A data management system comprising:

a plurality of storage devices individually comprising a physical storage space, wherein the physical storage space of one of the storage devices is configured to store a baseline version of a data object and the physical storage space of an other of the storage devices is configured to store a delta version of the data object; and

processing circuitry configured to control storage operations of at least, one of the storage devices, to process a restore request with respect to the data object, to access the delta version from the other of the storage devices responsive to the restore request, and to initiate communication of data of the baseline version and the delta version of the data object to a computer system, ***wherein the processing circuitry is further configured to act as a proxy to extract remotely stored delta versions.***

(Emphasis added)

Applicant respectfully submits that claim 1, as amended, is allowable over the cited art for at least the reason that neither *Bauer* nor *Pearl*, taken alone or in combination, discloses, teaches, or suggests a "data management system... ***wherein the processing circuitry is further configured to act as a proxy to extract remotely stored delta versions***" as recited in claim 1, as amended. More specifically, *Bauer* discloses "a general purpose system which accommodates heterogeneous computers and databases. In general, a database synchronizer is used to share data among many nodes on the computing system" (column 1, line 63). However, *Bauer* fails to suggest a

"data management system... *wherein the processing circuitry is further configured to act as a proxy to extract remotely stored delta versions*" as recited in claim 1, as amended.

Additionally, *Pearl* fails to overcome the deficiencies of *Bauer*. More specifically, *Pearl* discloses a "client-side database synchronizer 27x [that] comprises a client catalog structure 60x containing table correspondences 60x-1,..., 60x-X includes an ordered sequential listing of all of the replicated columns in each of the tables 22x-1,..., 22x-X of the local database 22x. Each before-image log 62x-1,..., 62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,..., 22x-X of the local database 22x" (column 8, line 12). However, *Pearl* fails to suggest a "data management system... *wherein the processing circuitry is further configured to act as a proxy to extract remotely stored delta versions*" as recited in claim 1, as amended. For at least these reasons, claim 1, as amended, is allowable.

B. Claim 11 is Allowable Over Bauer in view of Pearl

The Office Action indicates that claim 11 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 7,100,005 ("*Pearl*"). Applicant respectfully traverses this rejection for at least the reason that *Bauer* in view of *Pearl* fails to disclose, teach, or suggest all of the elements of claim 11. More specifically, claim 11 recites:

A data management system comprising:

a plurality of storage subsystem means individually comprising physical storage means for storing data corresponding to a plurality of data objects and processing means for controlling storage operations with respect to the respective physical storage means;

database means for tracking storage locations of data of the data objects in corresponding ones of the storage subsystem means;

wherein the processing means of one of the storage subsystem means comprises means for controlling the storage of a baseline version of a data object using the respective physical storage means corresponding to the one of the storage subsystem means and for initiating the storage of a delta version of the data object using an other of the storage subsystem means;

wherein the database means comprises means for storing information regarding the storage location of the delta version using the other of the storage subsystem means; and

wherein the processing means outputs the delta version to the other of the storage subsystem means after determining that insufficient storage capacity exists at the one of the storage subsystem means to store the delta version, **wherein the processing means is further configured to verify storage of the baseline version of data with a manager means for tracking purposes using the database means.**

(Emphasis added)

Applicant respectfully submits that claim 11, as amended, is allowable over the cited art for at least the reason that neither *Bauer* nor *Pearl*, taken alone or in combination, discloses, teaches, or suggests a “data management system... **wherein the processing means is further configured to verify storage of the baseline version of data with a manager means for tracking purposes using the database means**” as recited in claim 11, as amended. More specifically, *Bauer* discloses “a general purpose system which accommodates heterogeneous computers and databases. In general, a database synchronizer is used to share data among many nodes on the computing system” (column 1, line 63). However, *Bauer* fails to suggest a “data management system... **wherein the processing means is further configured to verify storage of the baseline version of data with a manager means for tracking purposes using the database means**” as recited in claim 11, as amended.

Additionally, *Pearl* fails to overcome the deficiencies of *Bauer*. More specifically, *Pearl* discloses a “client-side database synchronizer 27x [that] comprises a client catalog structure 60x containing table correspondences 60x-1,..., 60x-X includes an ordered sequential listing of all of the replicated columns in each of the tables 22x-1,..., 22x-X of the local database 22x. Each before-image log 62x-1,..., 62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,..., 22x-X of the local database 22x” (column 8, line 12). However, *Pearl* fails to suggest a “data management system... **wherein the processing means is further configured to verify storage of the baseline version of data with a manager means for tracking purposes**

using the database means" as recited in claim 11, as amended. For at least these reasons, claim 11, as amended, is allowable.

C. Claim 15 is Allowable Over Bauer in view of Pearl

The Office Action indicates that claim 15 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("Bauer") in view of U.S. Patent Number 7,100,005 ("Pearl"). Applicant respectfully traverses this rejection for at least the reason that *Bauer* in view of *Pearl* fails to disclose, teach, or suggest all of the elements of claim 15. More specifically, claim 15 recites:

A data management system storage device comprising:
an interface configured to communicate data with respect to other storage devices of a data management system, and to communicate data of a data object with respect to a computer system;
a physical storage space configured to store a baseline version of the data object at an initial moment in time; and
processing circuitry configured to receive a request to store a delta version of the data object at a subsequent moment in time after the initial moment in time, to obtain information regarding a capacity of the storage device, and to initiate storage of the delta version of the data object using one of the other storage devices of the data management system responsive to the analysis of the information, wherein the processing circuitry outputs the delta version to the one of the other storage devices after determining that insufficient storage capacity exists at the storage devices to store the delta version, ***the processing circuitry being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database.***

(Emphasis added)

Applicant respectfully submits that claim 15, as amended, is allowable over the cited art for at least the reason that neither *Bauer* nor *Pearl*, taken alone or in combination, discloses, teaches, or suggests a "data management system storage device comprising... processing circuitry... ***the processing circuitry being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database***" as recited in claim 15, as amended. More specifically, *Bauer* discloses "a general purpose system which accommodates heterogeneous computers and databases. In general, a

database synchronizer is used to share data among many nodes on the computing system" (column 1, line 63). However, *Bauer* fails to suggest a "data management system storage device comprising... processing circuitry... ***the processing circuitry being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database***" as recited in claim 15, as amended.

Additionally, *Pearl* fails to overcome the deficiencies of *Bauer*. More specifically, *Pearl* discloses a "client-side database synchronizer 27x [that] comprises a client catalog structure 60x containing table correspondences 60x-1,..., 60x-X includes an ordered sequential listing of all of the replicated columns in each of the tables 22x-1,..., 22x-X of the local database 22x. Each before-image log 62x-1,..., 62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,..., 22x-X of the local database 22x" (column 8, line 12). However, *Pearl* fails to suggest a "data management system storage device comprising... processing circuitry... ***the processing circuitry being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database***" as recited in claim 15, as amended. For at least these reasons, claim 15, as amended, is allowable.

D. *Claim 19 is Allowable Over Bauer in view of Pearl*

The Office Action indicates that claim 19 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 7,100,005 ("*Pearl*"). Applicant respectfully traverses this rejection for at least the reason that *Bauer* in view of *Pearl* fails to disclose, teach, or suggest all of the elements of claim 19. More specifically, claim 19 recites:

An article of manufacture comprising:
a processor-useable tangible medium comprising processor-useable code configured to cause processing circuitry of one of a plurality of storage devices of a data management system to:
receive a request to store a baseline version of a data object;

store the baseline version using physical storage space of the one of the storage devices; receive a request to store a delta version of the data object after the effecting storage of the baseline version:
access information regarding a status of the one of the storage devices; and
determine that the one of the storage devices has insufficient storage capacity to store the delta version; and
store the delta version using an other of the storage devices of the data management system after determining that the one of the storage devices has insufficient storage capacity to store the delta version, *the processor-usable tangible medium being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database.*

(Emphasis added)

Applicant respectfully submits that claim 19, as amended, is allowable over the cited art for at least the reason that neither *Bauer* nor *Pearl*, taken alone or in combination, discloses, teaches, or suggests a “article of manufacture comprising... a processor-usable tangible medium... *the processor-usable tangible medium being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database*” as recited in claim 19, as amended. More specifically, *Bauer* discloses “a general purpose system which accommodates heterogeneous computers and databases. In general, a database synchronizer is used to share data among many nodes on the computing system” (column 1, line 63). However, *Bauer* fails to suggest a “article of manufacture comprising... a processor-usable tangible medium... *the processor-usable tangible medium being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database*” as recited in claim 19, as amended.

Additionally, *Pearl* fails to overcome the deficiencies of *Bauer*. More specifically, *Pearl* discloses a “client-side database synchronizer 27x [that] comprises a client catalog structure 60x containing table correspondences 60x-1,..., 60x-X includes an ordered sequential listing of all of the replicated columns in each of the tables 22x-1,..., 22x-X of the local database 22x. Each before-image log 62x-1,..., 62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,..., 22x-X of the local database 22x” (column 8, line 12). However, *Pearl* fails to suggest a

"article of manufacture comprising... a processor-usable tangible medium... ***the processor-usable tangible medium being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database***" as recited in claim 19, as amended. For at least these reasons, claim 19, as amended, is allowable.

E. Claim 23 is Allowable Over Bauer in view of Pearl

The Office Action indicates that claim 23 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("Bauer") in view of U.S. Patent Number 7,100,005 ("Pearl"). Applicant respectfully traverses this rejection for at least the reason that *Bauer* in view of *Pearl* fails to disclose, teach, or suggest all of the elements of claim 23. More specifically, claim 23 recites:

A data management method comprising:
receiving a baseline version of a data object of a computer system using one of a plurality of storage devices of a data management system;
storing the baseline version using the one of the storage devices after the reception of the baseline version;
receiving a request using the one of the storage devices, wherein the request comprises a request to store a delta version of the baseline version; analyzing a capacity of the one of the storage devices; determining, that the one of the storage devices has insufficient storage capacity to store the delta version; and
storing the delta version using an other of the storage devices after determining that the one of the storage devices has insufficient storage capacity to store the delta version; and
verifying storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database.

(Emphasis added)

Applicant respectfully submits that claim 23, as amended, is allowable over the cited art for at least the reason that neither *Bauer* nor *Pearl*, taken alone or in combination, discloses, teaches, or suggests a "data management method comprising... ***verifying storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database***" as recited in claim 23, as amended. More specifically, *Bauer* discloses "a general

purpose system which accommodates heterogeneous computers and databases. In general, a database synchronizer is used to share data among many nodes on the computing system" (column 1, line 63). However, *Bauer* fails to suggest a "data management method comprising... **verifying storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database**" as recited in claim 23, as amended.

Additionally, *Pearl* fails to overcome the deficiencies of *Bauer*. More specifically, *Pearl* discloses a "client-side database synchronizer 27x [that] comprises a client catalog structure 60x containing table correspondences 60x-1,..., 60x-X includes an ordered sequential listing of all of the replicated columns in each of the tables 22x-1,..., 22x-X of the local database 22x. Each before-image log 62x-1,..., 62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,..., 22x-X of the local database 22x" (column 8, line 12). However, *Pearl* fails to suggest a "data management method comprising... **verifying storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database**" as recited in claim 23, as amended. For at least these reasons, claim 23, as amended, is allowable.

F. Claims 3 – 10, 12 – 14, 16 – 18, 20 – 22, and 24 – 39 are Allowable Over Bauer in view of Pearl

The Office Action indicates that claims 3 – 10, 12 – 14, 16 – 18, 20 – 22, and 24 – 39 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("Bauer") in view of U.S. Patent Number 7,100,005 ("Pearl"). Applicant respectfully traverses this rejection for at least the reason that *Bauer* in view of *Pearl* fails to disclose, teach, or suggest all of the elements of claim 3 – 10, 12 – 14, 16 – 18, 20 – 22, and 24 – 39. More specifically, dependent claims 3 – 10 and 31 – 35 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 1. Dependent claims 12 – 14 are believed to be allowable for at least the reason that they depend from allowable independent claim 11. Dependent claims 16 – 18 and 36 are believed to be allowable

for at least the reason that they depend from allowable independent claim 15. Dependent claims 20 – 22 and 37 – 39 are believed to be allowable for at least the reason that they depend from allowable independent claim 19. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

G. Claims 36 – 39 are Allowable Over Bauer in view of Pearl further in view of Rothbarth

The Office Action indicates that claims 36 – 39 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("Bauer") in view of U.S. Patent Number 7,100,005 ("Pearl") further in view of U.S. Patent Publication Number 2004/0078602 ("Rothbarth"). Applicant respectfully traverses this rejection for at least the reason that *Bauer* in view of *Pearl* further in view of *Rothbarth* fails to disclose, teach, or suggest all of the elements of claim 36 – 39. More specifically, dependent claim 36 is believed to be allowable over *Bauer* and *Pearl* for at least the reason that this claim depends from allowable independent claim 15. Dependent claims 37 – 39 are believed to be allowable for at least the reason that they depend from allowable independent claim 19. Because *Rothbarth* fails to overcome the deficiencies of *Bauer* and *Pearl*, claims 36 – 39 are allowable as a matter of law. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or addressed, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and Official Notice, or statements interpreted similarly, should not be considered well-known for the particular and specific reasons that the claimed combinations are too complex to support such conclusions and because the Office Action does not include specific findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

/afb/
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